



ENVIRONMENTAL MONITOR



Fall 2000

U. S. Army Northern Regional Environmental Office

COL Lillie Takes USAEC Reins



By Yvonne Johnson, Aberdeen Proving Ground, and Neal Snyder, USAEC

Citing a "tradition of excellence" set by his predecessors, Col. Stanley H. Lillie became the U.S. Army Environmental Center's 12th commander on August 4, 2000, in a ceremony at Aberdeen Proving Ground, Maryland.

Soldiers and civilians gathered to welcome Col. Lillie and bid farewell to Col. Edward W. Newing, now chief of staff for the U.S. Army Soldier and Biological Chemical Command, also at Aberdeen.

Col. Lillie comes to USAEC from the Pentagon, where he served as the director of Chemical and Biological Defense Programs in the Office of the Secretary of Defense.

Along with Col. Newing, five of the 11 former USAEC commanders attended the ceremony. They included retired Maj. Gen. Ralph G. Wooten and retired colonels John D. Spence, Louis M. Jackson, Daniel F. Uyesugi, and Richard K. Weiner.

"You've all set a great example for me," Col. Lillie said. "I hope to continue the tradition of excellence that has been your legacy."

To that tradition, Col. Lillie said he would like to add an increased emphasis on major Army command (MACOM) and installation support.

Installation environmental staff "is where the rubber meets the road," Col. Lillie said. "I want them to know we are here to assist them, to manage the major programs, and to make sure they get the resources, the expertise, the guidance and assistance they need to get the job done."

He also wants to increase the visibility of the Army environmental program's achievements.

"The Army is doing a great job of taking care of the environment," Col. Lillie said.



Major General Robert Van Antwerp, the Assistant Chief of Staff of the Army for Installation Management, salutes the colors during the AEC change of command ceremony. Flanking MG Van Antwerp are outgoing AEC Commander, COL Edward W. Newing (left), and incoming AEC Commander, COL Stanley H. Lillie (right).

"That story really isn't getting out."

With 23 years as a chemical corps officer, the new USAEC commander has been a company and battalion commander, and administrator and battalion executive officer at the U.S. Army Chemical School at Fort McClellan, Ala. Col. Lillie was commander of the 83rd Ordnance Battalion and Akizuki Army Ammunition Depot in Kure, Japan, when he was tapped for his first Pentagon assignment—strategist in the Army Initiatives Group, Deputy Chief of Staff for Operations and Plans.

In Japan, responsible for four major installations and a housing area, Col. Lillie learned to rely on the environmental experts at the next higher headquarters. "They were very knowledgeable," Col.

Lillie said. "Thanks to them I didn't have to be the expert."

However, Col. Lillie's biology background, added to his chemical experience, translates well into the environmental field.

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FROM THE CHIEF

by Jim Hartman

As of July 16, 2000, I moved over from the Massachusetts Military Reservation (MMR) to become the new Chief of the Northern Regional Environmental Office. I have inherited a very gifted staff from Bill Herb who has subsequently moved over to become the Chief of AEC's Environmental Quality Division where Bill will undoubtedly excel in a very demanding position. Thanks, Bill, for all of your encouragement and support in getting me acclimated to the NREO.

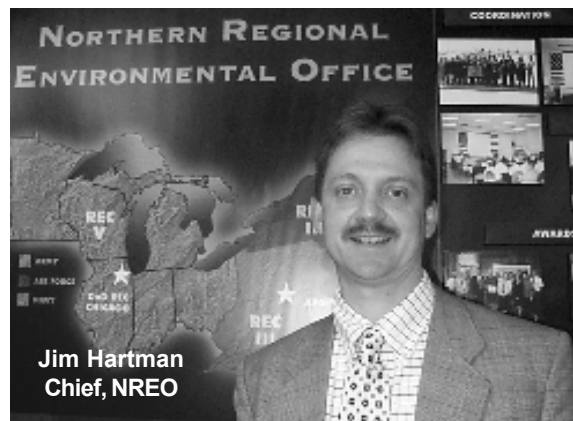
It is comforting to know that I am no longer the newest arrival, as the U.S. Army Environmental Center change of command took place on August 4, 2000, and Colonel Stanley Lillie has become the twelfth commander. AEC is a world-class organization, filled with a diverse talent pool of environmental professionals, challenging its work force to be innovative and in tune with stakeholder needs.

On September 5, 2000, the REOs celebrated their fifth anniversary, and I know that great things are expected of me in this position. I am very grateful to all the other REOs, who gave me a very warm welcome to the NREO. The cohesiveness of the Army REOs is simply

unmatched. I can't begin to describe the great feelings I experienced becoming a part of the AEC Team and one of the Army's four REOs. This is not just another Army job!

I do feel prepared for this position after spending 18 months as Director of a Joint Program Office (MMR), 4.5 years as a Director of Environment (Fort Bliss, Texas), 6 years as a MACOM Environmental Chief (United States Forces Korea/Eighth United States Army), and a summer fellowship with the Army Environmental Policy Institute. In view of my past employment, I have had the opportunity and privilege to look at the Army's environmental side of the house from practically all perspectives.

I know that you folks at the installations and MACOMs have some of the most challenging jobs in the Army, and our ultimate goal at the NREO is to be a value-added organization to you. I will be getting out to meet as many of you as I possibly can over the duration of the calendar year, and I am interested in understanding your issues and where the NREO can be of service. Please don't hesitate to call me and/or send me an e-mail in advance of me having the



opportunity to personally meet with you.

Outside of logistically moving my family from Cape Cod to the Mid-Atlantic, buying and selling a home, the last 60 days or so have been both hectic and productive. I had the opportunity to attend the Environmental Council of States (ECOS) Annual Meeting (August 13-15, 2000), and the Region III DOD/EPA/States Colloquium (August 22-24). I would like to pass on my observations from these events.

- There is a changing of the guard, so to speak, on enforcement:
- 75% of all enforcement actions each year are now state enforcement actions, not federal enforcement actions.
- State environmental departments now have 5 times as many employees as the USEPA.
- 80% of the money spent on environmental issues by the state and federal governments is state money.
- 77% of the USEPA programs that can be delegated to the states, have been delegated to the states.
- Both the EPA and the states are placing a strong emphasis on the application of Environmental Management Systems (EMSs), encouraging all to participate in EMS programs (which is consistent with Executive Order 13148, Greening the Government through Leadership in Environmental Management, April 21, 2000). A few of the states, such as Virginia, are using a tiered approach to EMSs that is not only pragmatic but also very achievable for both small businesses and for federal facilities.
- Our regulators are now considering rewarding "good environmental performers" with incentive programs such as expediting permits. It appeared to be implied that a clean historical compliance record and the application of an EMS were prerequisites for the "good environmental performer" status.

NORTHERN REGIONAL ENVIRONMENTAL MONITOR

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Chief, Public Affairs **Brian W. Norris**
Chief, NREO **James Hartman**
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Our Mission: *The NREO was established in 1995 to support the Army and DoD mission through coordination, communication and facilitation of regional environmental activities. The Army REOs are part of a DoD network in which the Army, Navy and Air Force each has lead responsibility for mission implementation in the federal regions. The NREO has DoD lead responsibility for Region V, and Army lead responsibility for Regions I, II, III and V.*

Quotes FROM THE COMMANDER

ON PEOPLE

"I think our greatest resource is people and therefore they are my focus, especially in a place like this where you have so many highly trained experts in the field. We need to make sure we capitalize on their experience and do the right thing for the environment."

"The folks at the installations are our front line as stewards of the environment, and I want to commend them for the great job they are doing. All these environmental programs don't get done unless they ensure it is being taken care of. I want them to know we are here to assist them."

ON READINESS AND THE ENVIRONMENT

"I believe readiness is the most important goal, and taking care of the environment has a major, positive effect on readiness. Many of the goals are the same. For example, in taking care of the training areas and ensuring they are in good condition for training we are taking care of the environment. We want to ensure we have great training areas for the future and to ensure that, we have to take care of our ranges."



Col Stanley H. Lillie

ON THE FUTURE

"All of the major areas of the Army environmental program are important: conservation, restoration, compliance and pollution prevention. As we look to the future we need to concentrate on the prevention aspect. Most of the problems we're dealing with today were caused in the past, so we need to concentrate now on looking toward the future, that we don't continue to cause problems that will cost us money, time, effort and resources. Unless we're vigilant, we could potentially get to the point where we don't have the resources to fix the problem — it would be just more than we could afford."

"Keep in mind, most of the problems we're encountering were based on actions that were legal at the time. So we not only need to be concerned about current laws, as we look to the future, but also about the potential new laws that could cause something we do today to be illegal in the future. We need to make sure we mitigate those risks today so they are not a problem for us in the future."

COL LILLIE

(Continued from page 1)

In my last assignment with the Office of the Secretary of Defense, my office was the focal point for the chemical demilitarization program. There are a lot of environmental issues associated with the demil program. I feel I have a broad background and bring some additional perspectives to the center," Col. Lillie said.

The Nashville native holds a bachelor's degree in biology from Middle Tennessee State University and a master's degree in National Resources Strategy from the Industrial College of the Armed Forces. He is also a graduate of the Air Command and Staff College, the Chemical Officer's Basic and Advanced courses and the

Materiel Acquisition Management Course.

Maj. Gen. Robert L. Van Antwerp, assistant chief of staff for installation management, led the change of command ceremony.

"We know you will be successful because of those who came before you," MG Van Antwerp told Col. Lillie. "I know you will prevail because of what you bring to the table."

MG Van Antwerp called the number of things accomplished under Col. Newing's command "amazing."

"The biggest stress has been to downsize this organization, but no one said 'do less,' they said 'do more,'" MG Van Antwerp said, adding that he has come to "count on USAEC leadership."

"You've made us all better and we wish you success. Thank you for being an

eagle leader," MG Van Antwerp told Col. Newing.

Col. Newing thanked the USAEC 'family,' "from the leadership to the support networks" for helping him through the past two years.

"Right over there in those World War I and World War II barracks are people who have saved us hundreds of millions in environmental dollars," Col. Newing said. "They've done that regardless of who was at the helm."

Col. Newing was awarded the Legion of Merit for exceptionally meritorious service, signed by Secretary of the Army, Louis Caldera. His wife, Colleen Newing, received a Certificate of Appreciation for donating "many hours in support of programs to improve the quality of life for soldiers, civilians, and their families in the Edgewood community."



By
Robert Muhly
Army Region
III REC

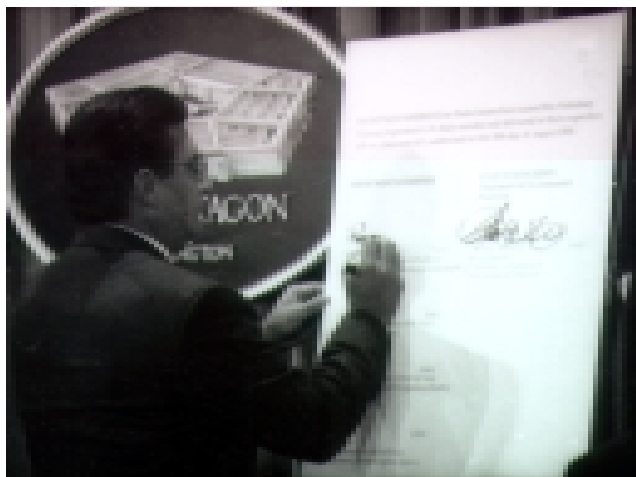
In a ceremony at the Pentagon on Wednesday, August 30, 2000, senior representatives of the New Jersey Department of Environmental Protection (NJDEP) and the Military Services executed an agreement aimed at speeding up cleanups of contaminated military sites in the state while reducing cleanup costs. The Voluntary Cleanup Agreement (VCA) is the culmination of a 1998 agreement in principle between NJDEP Commissioner Robert Shinn and Ms. Sherri Goodman, Deputy Under Secretary of Defense for Environmental Security.

Ms. Goodman opened the ceremony with an overview of the agreement, and reaffirmed the Department of Defense (DOD) belief that such agreements with states serve to improve the military's cleanup record by accomplishing quicker, better, and cheaper restoration of sites. The New Jersey agreement is the second of its kind. Pennsylvania and the services entered into a similar agreement in 1998.

Mr. Shinn signed the agreement for New Jersey, followed by the service environmental chiefs - Mr. Ray Fatz (Army), Mr. Paul Yaroschak (Navy, for Ms. Elsie Munsell), Mr. Tad McCall (Air Force), and Mr. Jan Reitman (Defense Logistics Agency). Present also were many of the signatory agency work group representatives who developed the agreement.

The New Jersey agreement seeks to build upon existing partnerships and agreements to achieve even better

NEW JERSEY VOLUNTARY CLEANUP AGREEMENT RATIFIED



Mr. Ray Fatz, Deputy Assistant Secretary of the Army for Environment, Safety and Occupational Health, signs the agreement on behalf of the Army.

cleanup results in the future. Benefits from the agreement include a joint planning process, development of common technical standards and understandings, and improved collaboration and information sharing. Targets are those sites on active installations, installations undergoing base realignment or closure (BRAC), and Formerly Used Defense Sites (FUDS) that are not on the U.S. Environmental Protection Agency's National Priorities List (NPL).

In developing the agreement, work group members sought to fashion a document that was less technically binding than it was a framework for increased levels of communication and cooperation. The primary objectives of the New Jersey VCA are to:

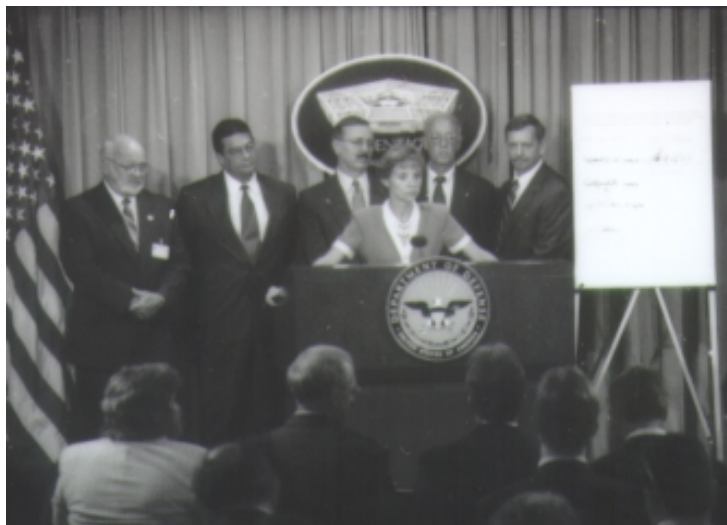
- Help manage state and military workloads more efficiently
- Create a cleanup effort that can better reflect the unique characteristics of the state and its regulations, within a framework that builds on the Defense/State Memorandum of Agreement (DSMOA) and existing efforts
- Provide opportunities to improve communication between New Jersey and the services
- Memorialize and promote best and innovative practices
- Create a shared understanding of goals, concerns and constraints
- Develop a consistent service component approach to remediation within the state

To attain those objectives, the state and services agreed that:

- The services will provide notice and information to NJDEP as soon as practicable concerning additions and changes to anticipated remediation

projects

- The services will provide open, early and continuing communications whenever there is information not previously known and communicated regarding a site that has the potential to require remediation or has a significant change in the planned remediation
- The services will submit documents related to remediation activities for review, and may elect to proceed with work prescribed by NJDEP comments in order to obtain a No Further Action letter and Covenant Not to Sue
- For active (non-transferring) military properties on which an institutional or engineering control will be used to protect human health and the environment, and for which the service is seeking a No Further Action letter, NJDEP will accept an amended installation master plan in lieu of the required record of deed notice
- When an institutional control will be used in order to protect human health and the environment on military property that is planned for transfer, and the service is seeking a No Further Action letter, the service will place appropriate restrictions in the deed transferring the property
- When institutional or engineering controls will be used, in whole or in part, as a remedy at a Formerly Used Defense Site or other transferred site on which the service is seeking a No Further Action letter, the service will ensure that the controls are developed, established, and maintained to protect human health and the environment for so long as such controls are required
- NJDEP will not require permits for the portion of any remedial action con-



Ms. Sherri Goodman, Deputy Under Secretary of Defense for Environmental Security, addresses the audience at the signing ceremony in the Pentagon. Standing behind Ms. Goodman, from the left, are the Honorable Robert Shinn, Commissioner, New Jersey Department of Environmental Protection; and the Deputy Assistant Secretaries who head their respective Service environmental programs: Mr. Ray Fatz (Army), Mr. Paul Yaroschak (Navy), Mr. Tad McCall (Air Force), and Mr. Jan Reitman (DLA).

ducted entirely on a service facility or FUDS property

- The services agree to provide detailed submissions to NJDEP to enable required data review, documentation, and calculations related to substantive construction requirements and discharge or effluent limitations
- For each installation, facility, or FUDS property in the state, the cognizant service will designate an individual responsible for managing remedial and removal actions
- For each installation, facility or FUDS property in the state, NJDEP will des-

ignate an individual responsible for documentation review

• The services will provide the Pinelands Commission with copies of all submissions to NJDEP for sites located within the boundaries of the Pinelands National Reserve; NJDEP will coordinate comments on these documents and provide a joint response

• NJDEP and the services will resolve differences in accordance with New Jersey DSMOA or other mutually agreed dispute

resolution mechanisms

In a statement to the press, Ms. Goodman said that the New Jersey agreement should save taxpayers about \$50 million from the \$370 million currently budgeted to clean up the approximate 550 contaminated military sites in the state over the next two decades. Ms. Goodman also stated that none of the sites currently covered by the agreement poses an imminent threat to public health or the environment.

Rep. Jim Saxton (R - Mt. Holly), whose district includes Fort Dix and McGuire Air Force Base, praised the partnership. "Like responsible businesses and government bodies, the new military is far more concerned about the environment than in the past," he said.

The complete text of the New Jersey agreement, and the inventory of contaminated sites, are available on the DENIX OSD website at <http://www.denix.osd.mil/denix/denix.html>.

For further information on the New Jersey agreement, contact:

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New Chesapeake "2000" Agreement Signed

By Leslie J. Reliford
USAEC Public Affairs

The plan for the next decade of Chesapeake Bay watershed protection received the approval of three state governors, the District of Columbia mayor and the top Environmental Protection Agency official June 28 during a ceremony on the Bay in Anne Arundel County, Md.

"Chesapeake 2000, A Watershed Partnership," the new Chesapeake Bay agreement, was signed by EPA Administrator Carol Browner on behalf of all federal agencies. It renews an intergovernmental pact originally signed in 1983.

Other signers included Maryland Governor Parris Glendening, Virginia Governor James Gilmore, Pennsylvania Governor Tom Ridge, District of Columbia Mayor Anthony Williams and Chesapeake Bay Commission Chairman Bill Boiling. These six comprise the Chesapeake Bay Executive Council. Ridge and Gilmore sent representatives to the ceremony.

The new agreement's principal focus is to improve the quality of water adequately enough to maintain the health of the Chesapeake Bay's inhabitants and its tidal tributaries now and in the future, according to a Chesapeake Bay Program release.

Browner called this "an extremely important day—somewhat of a historic day."

"The agreement that was signed this morning reflects a shared vision for the restoration and protection of one of our nations most wonderful natural resources, the Chesapeake Bay," Browner added.

Prior to the 1983 Chesapeake Bay Agreement, the Department of Defense had paid more than \$180 million for restoration projects in the Chesapeake Bay watershed. "Army installations along the Chesapeake Bay are continuously committed to restoration and protection of the bay and its habitat as part of the army training and readiness mission," said Cynthia Houston, senior consultant to the National Outreach Team for the U. S.



(From left) Maryland Governor Parris Glendening, District of Columbia Mayor Anthony Williams, Maryland Lieutenant Governor Kathleen Kennedy Townsend, and EPA Administrator Carol Browner were among those signing the new Chesapeake Bay Agreement.

(From left) Dr. Jim Bailey of APG Directorate of Safety, Health and Environment (DSHE) and Julie Bortz of the United States Army Environmental Center (USAEC) prepare to plant wild celery *Vallisneria Americana* an SAV plant in the Chesapeake Bay as part of the army's ongoing bay restoration efforts.



(from left) Julie Bortz of USAEC and Stan Kollar of Harford Community College are restoring SAV to the bay by preparing to plant wild celery (*Vallisneria Americana*) into Weir Cove on Carroll Island, A.P.G. in the lower Gunpowder River.



Army Environmental Center (USAEC) Public Affairs Office.

Some examples of the Army activities at the installation level include submerged aquatic vegetation (SAV) mapping and research, habitat restoration, stormwater pollution prevention planning, riparian forest buffer planting and the Army's Integrated Training Area Management (ITAM) program.

SAV MAPPING

There are 16 species of SAV commonly found in the Chesapeake Bay or nearby waters. The vegetation plays an important ecological role to the aquatic environment by providing food and habitat, producing oxygen, filtering and trapping sediment, protecting shorelines from erosion, and removing excess nutrients, thus preventing the fueling of unwanted algae growth.

"Army installations have done numerous water quality programs, sedimentation programs, soil erosion programs, and numerous programs within their installations that have supported the Chesapeake Bay restoration," said JanMichael Graine, Chesapeake Bay coordinator for USAEC. "The Army has been a part of the Chesapeake Bay Program and the restoration and protection of the bay since the 1960's."

(Continued on page 7)

Army Celebrates National Public Lands Day

by **Brian Feeney**
Contributing Writer

Soldiers and civilians worked side by side planting native vegetation, erecting bird boxes and building low impact hiking trails at Army installations across three states in the Chesapeake Bay watershed Sept. 23. Their activities were part of a U.S.-wide celebration of National Public Lands Day that included 270 public land sites and over 50,000 volunteers.

At Aberdeen Proving Ground, located on the Chesapeake Bay in northeast Maryland, 75 volunteers including the staff of the U.S. Army Environmental Center, soldiers and Boy Scouts planted a BayScapes demonstration garden. The garden uses native vegetation to filter pollution, provide wildlife habitat and improve water quality. At Fort Lee, next to the James River in Virginia, 25 volunteers began a four and a half acre BayScapes garden at the installation's main gate.

Another Army post to join the celebration was Fort Belvoir, located in northern Virginia on the Potomac River. Volunteers teamed with the Fairfax County Audubon Society to realign a trail in the Fairfax family home site so that it



would no longer disturb a wetlands area. The twenty-four participants, including students from Fort Belvoir Elementary School, also planted trees and shrubs, added benches and placed interpretive signs explaining the site's history.

At Carlisle Barracks, near Harrisburg, Penn., 75 volunteers including Boy Scouts, Girls Scouts, Cub Scouts and U.S. Army Reserve Officers Training Corps cadets from nearby Dickinson College installed bluebird boxes, butterfly boxes and planted ten additional trees in the post's Heritage Park.

Sixty volunteers at the U.S. Naval Academy, located at the mouth of the Severn River in Annapolis, planted 80

native trees and 50 native shrubs to create a buffer area between a Navy family housing area and the river.

All of the National Public Lands Day projects were made possible by grants from the National Environmental Education & Training Foundation, a national non-profit organization. Since 1993, National Public Lands Day has grown from 200 volunteers in three states to an estimated 30,000 volunteers and a work-force value of \$8 million for year-2000 activities.

Speaking of National Public Lands Day, Secretary of Defense William S. Cohen said, "Even as we prepare for conflict and peacekeeping, we remain vigilant in safeguarding the Earth and our citizens. These responsibilities are indivisibly linked - to be a steward of one is to be a protector of the other."

The U.S. Army operates 19 military installations in the Chesapeake Bay watershed. These facilities cover 215,000 acres of land, most of it undeveloped.

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AGREEMENT

(Continued from page 6)

SAV experts from USAEC research vegetation beds at Aberdeen Proving Ground, Md. In monitoring existing beds and mapping new ones, researchers use the Proving Ground's SAV to determine the current health of the Bay, and can help to predict its status in the future.

BAYSCAPES

In support of area habitat restoration is the planting of Bayscapes. Bayscapes promote a return to a more natural Chesapeake Bay landscape, by featuring mostly native plants best suited for local soil, sunlight and water conditions. Fort Meade, Maryland in conjunction with the U. S. Fish and Wildlife Service, are creating Bayscapes throughout its lands. "Bayscapes are a great idea that is still

maturing," said William Harmeyer, of Fort Meade's Environmental Management Office. "The Bayscape site is a demonstration site where public education and awareness are key, and Meade is planning to create an approximately 1,000 square foot site around its environmental headquarters building in October."

Bayscaping can also enhance Army training and readiness by affecting soldiers' well-being, according to Harmeyer. "In order for troops to be ready they must be healthy, by having a healthy watershed, clean air, good trees and a place their family can call home — as well as a healthy environment worth protecting."

INTEGRATED TRAINING

All of Fort A.P. Hill's more than 75,000 acres are contributors to the Chesapeake Bay watershed and are drained by the

Rappahannock and Mattaponi River systems. Located on the bay in Virginia, the fort's integrated training area practices include the development and implementation of an integrated Natural Resources Management Plan (INRMP).

According to Tim Southard, chief of the post's Natural Resources Branch, the installation actively supports the goals of the Chesapeake Bay Program through a variety of programs, facility and procedural upgrades.

The INMRP helps guide installation's natural resources program in the areas of forestry, land management, outdoor recreation, and fish and wildlife and is critical in combining the needs of military training with resource conservation goals.

Fort A.P. Hill is also a leading installation in the Army in using Geographical Information Systems to create natural resources information that can be used on training maps, protecting Bay resources during military exercises.



By
Fred Boecher
Army Region
III REC

VIRGINIA AND DOD FORM FIRST POLLUTION PREVENTION PARTNERSHIP IN REGION III

▶ The signing ceremony was held in the chambers of the Virginia House of Delegates in the State Capitol in Richmond. Addressing the assemblage is Mr. Dennis Treacy, Director of the Virginia Department of Environmental Quality.

▶ Page 9: The Honorable John Woodley, Jr., Secretary of the Virginia Department of Natural Resources, signs the Partnership Charter.

DoD, Federal, and State dignitaries on the dais were (left to right): Rear Admiral Christopher W. Cole, Commander, Navy Region Mid-Atlantic and DoD Regional Environmental Coordinator for Region III; Ms. Maureen Sullivan, representing the Office of the Deputy Secretary of Defense for Environmental Security; Ms. Barbara D'Angelo, representing the U.S. Environmental Protection Agency, Region III; the Honorable John Paul Woodley, Jr., Secretary, Virginia Department of Natural Resources (speaking); and Mr. Dennis Treacy, Director, Virginia Department of Environmental Quality.



Virginia Secretary of Natural Resources, John Paul Woodley, Jr., and RADM Christopher W. Cole were among the signatories at the Virginia/DOD Pollution Prevention Partnership signing ceremony on October 19, 2000, in the Capitol Building in Richmond, Virginia. Governor James Gilmore was unable to attend but had signed the charter prior to the ceremony.

.....

“ I’m very pleased that defense installations and EPA are joining Virginia in this pollution prevention initiative,” Governor Gilmore said when he signed the charter. “This cooperative agreement will strengthen the ability each of us has individually to take positive steps that conserve our natural resources and improve the quality of Virginia’s environment.”

.....

“We are looking forward to significant, measurable successes,” Secretary Woodley said. “This is the first agreement of its kind in Virginia involving federal and defense agencies, so we now have an important new tool in our efforts to protect the environment for all Virginians.”



Among the other participants for the Commonwealth of Virginia was Dennis Treacy, Director, Department of Environmental Quality. "Through this pollution prevention partnership we are not only building a business advantage, but also a military advantage", Mr. Treacy stated.

In addition to RADM Cole, who is the Commander, Navy Region Mid-Atlantic and the DOD Regional Environmental Coordinator for Region III, other signatories to the agreement were Ms. Barbara D'Angelo, U.S. Environmental Protection Agency, Region III, Office of Environmental Innovation; and Ms. Maureen Sullivan, Office of the Deputy Under Secretary of Defense for Environmental Security.

"This pollution prevention partnership is an excellent opportunity for all of us." RADM Cole commented during his remarks. "Partnerships provide the ability to build on individual successes."

The Commanders, or their representative, for most all the 28 military installations and activities in the Commonwealth, also signed the charter.

The overall mission of the partnership is to identify opportunities, develop solutions and promote successes in pollution prevention to enhance the pollution prevention missions of the participants, conserve resources, and improve the quality of Virginia's environment. Goals have been developed to review a number of specific practices



and processes that can be transferred among the participants, initiate cooperative projects, and externally share information through venues such as conferences, workshops, publications, and the internet.

Through the initiative of the participants a number of work groups already have been formed to address affirmative pollution prevention procurement policies and practices, the decrease or elimination of solvents, universal waste and aqueous film forming foam, and the management of hazardous materials. Cooperative projects have been initiated to increase member participation in the Virginia Naturally 2000 and the Businesses for the Bay programs.

Other cooperative efforts involve educating design engineers on sustainable building techniques, technologies, and processes, and an initiative to reduce the discharge of priority chemicals to Virginia's environment. A number of ac-

tions to share information and promote pollution prevention opportunities and programs also have been initiated.

The signing of the charter formalized a partnership that has been in the making for six months, and characterized by the enthusiastic participation of all the members of the partnership team. Based on this enthusiasm, and the large number of military activities in the Commonwealth of Virginia, there is tremendous potential to implement and transfer successful pollution prevention processes and programs that will improve the overall quality of the environment at these military activities and throughout the Commonwealth.



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AROUND THE STATES AND EPA REGIONS

[Ed. Note: This space usually is devoted to brief summaries of state and U.S. EPA regional activities in which the Northern Regional Environmental Office is involved. However, the recent annual meeting of the Environmental Council of States (ECOS) on August 13-15 in Girdwood, Alaska, offers an opportunity to highlight general state developments and trends. The following summaries are drawn from a report by the Army Regional Environmental Office Chiefs who attended the ECOS meeting.]

GENERAL OBSERVATIONS

- There is a strong voice of sovereignty among the states on state and local environmental issues.
- The U.S. EPA and the states are placing a strong emphasis on the application of Environmental Management Systems (EMSs), encouraging regulated entities to participate in EMS programs. Some states (e.g., Virginia) are using a tiered approach to EMSs which is not only pragmatic but very achievable for small businesses and federal facilities.
 - The U.S. EPA and the states made mention of rewarding "good environmental performers," with incentive programs such as expediting permits. It appeared to be implied that an EMS was a prerequisite for "good environmental performer" status. [Readers are encouraged to visit the EPA National Environmental Performance Track website at www.epa.gov/performance-track.]
 - There was widespread discussion again among the U.S. EPA and states of an aging workforce, the need for the regulatory agencies to develop mid-level managers for senior management positions, and the expectation that the new breed of managers would bring a new enforcement mindset which would focus on proactiveness (signaling perhaps an end to the command and control philosophy with this generation change).
 - States (e.g., Georgia, and Vermont) are asking people to evaluate and rethink their lifestyles. Georgia is trying to get people out of their cars to improve air quality. Its message to Georgians is that moving away from a single occupant vehicle is beneficial to the individual. Vermont has engaged the public in a series of environmental debates on the role of environmental responsibility of individuals. The debates have led to development of a series of 12 brochures describing how individuals can have a positive impact on the environment.
- There is a growing emphasis within the states to write environmental regulations in plain and understandable English.



STATE SUMMARIES

- **Delaware** issued its Biodiversity Report in December 1999, containing numerous recommendations. A Biodiversity Conference is being planned for sometime in late 2000.
- **Illinois'** emissions reduction marketing program is up and running. Approximately \$10,000/ton of VOC offsets were realized by the first sale where the company took the profits and immediately put them into an employee incentive program for alternate fuel use.
- **Maine** is collecting information for Phase 2 of its toxic release inventory (TRI) program. The state also is working with toxic ecologists to rank or prioritize chemical toxicity. Hot spots of toxicity will be linked with GIS.
- **Massachusetts** has established a Growth Management Committee, which has sponsored 20 well-attended summits across the state. GIS is being used for build-out analysis, looking 25 years into the future. A committee goal appears to be development of a Community Preservation Act.
- **Michigan** has restructured its compliance program so that it now is organized by industrial sector rather than by media. The state also is entering into a joint planning process with the U.S. EPA.
- **Minnesota** has issued its first report on the state of the environment for the everyday citizen. The report has gotten great press from local papers which had been strong critics of the state's environmental program. An editorial called for the average public to make behavioral changes to improve environmental quality and not focus solely on industry.
- **New Jersey** reported that its dispute resolution process has enjoyed an 80% success rate, and substantially reduced the enforcement case hearings workload (previously about 750 per year).
- **Ohio** highlighted the Lake Erie Commission, which is focusing on reducing sediment, and a proposed \$400 million bond issue on this November's ballot to allocate funds equally to green space and brown fields.
- **Rhode Island** has developed a Work Force 2000 Strategic Plan in conjunction with the U.S. EPA regional office in Boston. [The Rhode Island representative stated, "It's not un-American to work with EPA."]

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- **Virginia & Maryland** described the Chesapeake Bay 2000 Agreement, which was signed by multiple States on June 28 and sets highly specific goals. For example, by 2010, the goal is to achieve a 10% increase in Bay oysters, which serve as a good barometer of the health of the Bay.

NEWLY ELECTED ECOS OFFICERS

President

George E. Myer
Wisconsin Department of Natural Resources

Vice President

Ron Hammerschmidt
Kansas Department of the Environment

Secretary

Dennis Hemmer
Wyoming Department of the Environment



INDIANA POLLUTION PREVENTION PARTNERSHIP FINALIZES CHARTER

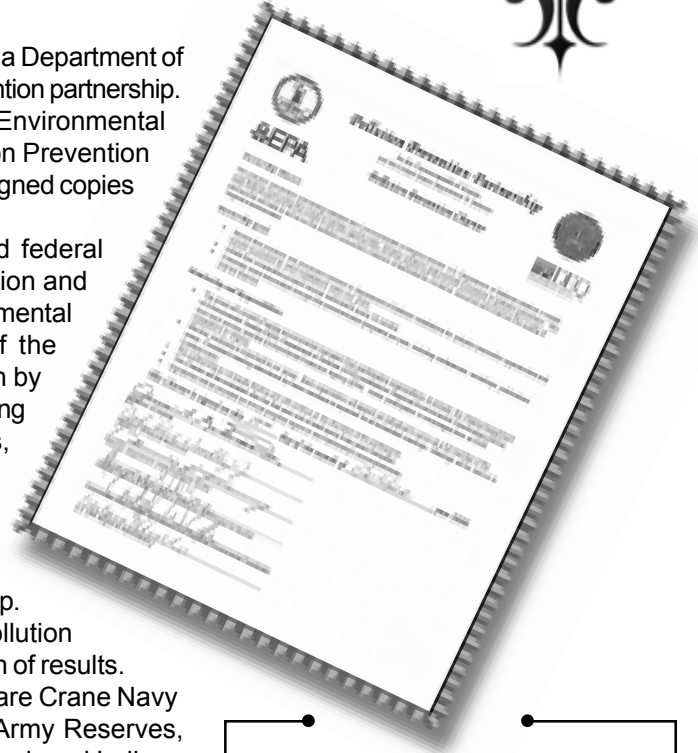


Department of Defense installations in Indiana and the Indiana Department of Environmental Management have officially launched a pollution prevention partnership. Ms. Lori Kaplan, Commissioner of the Indiana Department of Environmental Management, used the occasion of the Indiana 4th Annual Pollution Prevention Conference and Trade Show on September 20, 2000, to distribute signed copies of the charter to partnership members.

Military installations in Indiana will be working with state and federal environmental agencies on strategies to reduce sources of pollution and waste in their day-to-day operations. Major Paul Davis, the environmental manager at the Terre Haute Air Guard Base and Co-chair of the Partnership, stated, "We want to take a more preventive approach by using safer raw materials and less polluting technologies. By eliminating pollution at the point of generation, we can reduce disposal costs, protect the environment and enhance mission readiness."

"There is a lot to be gained by working with others to address some of the common environmental problems facing military installations in Indiana," added John Chavez, the Indiana Department of Environmental Management Co-chair of the partnership. The partnership's charter outlines goals that include integrating pollution prevention into everyday activities and emphasizing documentation of results.

Indiana DOD installations participating in the partnership effort are Crane Navy Surface Warfare Center, Crane Army Ammunition Activity, U.S. Army Reserves, U.S. Air Force Reserve Base Grissom, Indiana Army National Guard, and Indiana Air Guard Bases at Fort Wayne and Terre Haute. Non-Department of Defense agency participants include the U.S. Environmental Protection Agency Region V, Indiana Department of Environmental Management, and the Indiana Clean Manufacturing and Safe Materials Institute.



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SMART Team Formed for Savanna Army Depot Activity

By Hugh McAlear
Army Region V REC

A Strategic Management Analysis, Requirements and Technology (SMART) team has been established by the Army, U.S. Environmental Protection Agency Region V, and Illinois Environmental Protection Agency to address contamination issues and differences of opinion on the appropriate cleanup strategy at Savanna Army Depot Activity (SVADA). Mr. Ray Clark, the Principal Deputy to the Assistant Secretary of the Army for Installations and Environment, announced the formation of the team during a public meeting at SVADA on August 9, 2000.

This is the second SMART team to

be formed by the Army. The first, at Fort Ord, California, is considered to have been very successful in resolving outstanding issues. Congressman Don Manzullo of the Illinois 16th Congressional District, who has voiced concern over the rate of progress at SVADA, expressed his appreciation at the meeting that the SMART team will address his desire to get the cleanup moving.

The SVADA SMART team is headed by Colonel (retired) Dick Wright, former Chief of the Department of Defense Explosives Safety Board, and current Acting Director of the Army Environmental Policy Institute (AEPI) located in Atlanta, Georgia. Team members include representatives of the public, the regulatory agencies, the U.S.

Fish and Wildlife Service, and the Army.

The original scope for the SVADA team was to address unexploded ordnance (UXO). However, as a result of input from the local community, the scope has been expanded to include chemical contamination and whether it is being properly characterized. In addressing concerns regarding UXO issues, Mr. Clark stated, "The Army is trying to make sure it addresses UXO in a safe, cost-effective manner while also ensuring it does not destroy the surrounding environment."

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REGION III COLLOQUIUM QUALIFIES AS UNQUALIFIED SUCCESS

By Bill Arguto

U.S. EPA Region III Federal Facilities Coordinator

The Region III EPA/DOD/State Colloquium was held at the Omni Inner Harbor Hotel in Baltimore on August 22 - 24, 2000. This year's conference stressed "Partnerships for a Better Environment," and was jointly sponsored by Region III EPA, the Region's states, and the Department of Defense. The emphasis was on cooperation among federal, state and military regulators and the regulated community.

The conference attracted an attendance even larger than for previous conferences. More than 300 people registered from the military branches, the states and EPA, as well as from the National Security Agency, Amtrak, U.S. Postal Service, U.S. Department of Agriculture, U.S. Forest Service, National Association of Attorneys General, U.S. Department of Transportation, and the Federal Emergency Management Agency.

Keynote speakers this year were Admiral Christopher Cole, Commander, Navy Region Mid-Atlantic and DoD Regional Environmental Coordinator; Karla Perri, Assistant Deputy Under Secretary of Defense for Environmental Cleanup; and Brad Campbell, EPA Region III Administrator. Each presented an overview of their agency's current status and plans for the future.

Mr. Tayloe Murphy, formerly of the Virginia House of Delegates and a long-time advocate for the Chesapeake Bay, delivered the luncheon address in which he stressed the importance of partnering, but also warned of the importance to implement and achieve goals once partnerships are established.

Working closely with representatives from the region's states and the branches of the military, we were able to bring together programs and speakers who stressed the Partnership theme in such environmental areas as Remediation, Waste and Chemical Management, Beyond Compliance Initiatives, Environmental Audits and Enforcement, Watershed Management, and Clean Water and Clean Air Act programs.

Review of post-conference comments revealed that the colloquium was successful in its Partnership theme by showing the attendees how this works in areas of Pollution Prevention, Outsourcing and Privatization, Compliance Assistance and many other areas. The case studies



Pictured, clockwise from upper left: Mr. Brad Campbell, Regional Administrator, U.S. Environmental Protection Agency Region III; Ms. Karla Perri, Assistant Deputy Under Secretary of Defense for Environmental Cleanup; RADM Christopher Cole, Commander, Navy Region Mid-Atlantic and DoD Regional Environmental Coordinator for Region III; Mr. Tayloe Murphy, former Delegate to the Virginia House of Delegates; and Mr. Steve Olson, Office of the DoD Regional Environmental Coordinator for Region III.

presented showed where agencies can work together or learn by seeing what works for others.

Information and highlights from the colloquium may be found at: [url: http://www.epa.gov/reg3esd1/fedfac/index.html](http://www.epa.gov/reg3esd1/fedfac/index.html). For further information contact: Mr. Arguto, (215) 814-3367, e-mail: arguto.william@epa.gov, or Fred Boecher, Army Region III REC, (410) 436-7100, DSN 584, e-mail: fred.boecher@aec.apgea.army.mil.

New Resource Available on Economic Benefit Issues

By LTC Rich Jaynes
Environmental Law Division

THE issue of whether the Environmental Protection Agency (EPA) can or should collect penalties intended to recapture economic benefit from federal facility violators remains a hotly contested matter between EPA and the Department of Defense (DoD). Army installations have found that EPA now often uses economic benefit as well as size of business¹ penalties to inflate the size of the penalties it seeks. In addition, EPA often refuses to disclose its penalty calculations so as to obfuscate EPA's use of these "business penalties" during settlement negotiations with Army installations.

Consequently, installations must be vigilant in guarding against these tactics and in opposing them when EPA Regions attempt to apply them.

Recently, LTC Jackie Little, the newest member of the Environmental Law Division (ELD) Compliance Branch, completed the Masters of Law (LL.M.) program in environmental law at George Washington University. In partial satisfaction of the requirements for the LL.M., LTC Little wrote her thesis on the subject of EPA's BEN model² and its application to federal facility enforcement actions.

The thesis is an excellent and detailed articulation of the many objections that are being raised in response to EPA's new enforcement strategy against federal facilities that showcases economic benefit as its centerpiece. As such, it is a tremendous resource for meeting the challenges posed by EPA's new enforcement strategy. Following is the thesis abstract.

THESIS STATEMENT:

The economic benefit component of a civil penalty should not apply to federal agencies, particularly as calculated by the deficient methodology used in EPA's BEN model.

SUMMARY OF MAIN PROPOSITIONS SUPPORTING THESES STATEMENT:

1 No federal environmental statute expressly defines the term "economic benefit." EPA describes "economic benefit" variously as "represent[ing] the financial gains that a violator accrues by delaying and/or avoiding . . . pollution control expenditures" and "the amount by which a defendant is financially better off from not having complied with environmental requirements in a timely fashion." The key to benefit recapture in cases where a polluter delays or avoids compliance is EPA's presumption that "financial resources not used for compliance . . . are invested in projects with an expected direct economic benefit to the [violation]." According to EPA, "this concept of alternative investment – i.e., the amount the violator would normally expect to make by not investing in pollution control – is *the basis* for calculating the economic benefit of noncompliance." Since the concept of alternative investment does not apply to federal agencies, generally, there appears to be no basis for recapturing economic benefit in cases involving federal facility noncompliance.

2 Benefit recapture in the federal agency arena "improper[ly] interfere[s] with the missions assigned to and funds allocated for federal agencies by Congress" and, therefore, constitutes bad policy. Because the payment of EPA-imposed penalties effectuates a return to the U.S. Treasury

of dollars disbursed by it to support federal agency missions, mission accomplishment is necessarily impeded. Such money shuffling is appropriate when it functions as a deterrent measure to ensure that facility managers reorder priorities in order to achieve environmental compliance. However, economic benefit penalties, by seeking to "recover a net financial gain that does not exist" fail to serve as a deterrent and, instead, "serve only to degrade federal missions." It is unlikely that Congress intended such a result.

3 EPA has asserted that in cases of federal agency noncompliance, economic benefit accrues to the "federal government as a whole," with the Department of Treasury acting as the "surrogate holder of the benefit." EPA bases this position on its 1999 memorandum entitled "Guidance on Calculating the Economic Benefit of Noncompliance by Federal Agencies." This "guidance" document identifies the source of economic benefit in federal facility cases as the interest saved on unissued Treasury notes. If it is indeed the federal government or the Treasury that reaps the alleged benefits of a federal facility's noncompliance, EPA's position is arguably invalid as explained below.

a. Is It Legal for EPA to Recover Economic Benefit from the "Federal Government"? Environmental statutes authorize EPA to regulate federal departments and agencies – not the federal government as a whole. Clearly, EPA can collect noncompliance penalties only from those over which it has regulatory power – i.e., "departments, agencies, and instrumentalities." If no economic benefit accrues to these entities, however, EPA cannot legally include such benefit in penalties assessed against either individual facilities or the departments or agencies that oversee them. On the other hand, since the "federal government as a whole" is not subject

to EPA regulation under federal environmental laws, it is not liable for penalties of any kind. In short, EPA's position appears to leave the Agency without a violator from whom it can properly collect the economic benefit it so desperately seeks.

- b. Does the Policy Disgorge the Alleged Benefit or Does It Allow the Recipient of Such Benefit to Profit Twice? If the Treasury is the federal government entity that ultimately benefits from federal agency noncompliance, EPA's position guarantees that the Treasury "benefits" twice – first, by avoiding the costs associated with paying interest on notes that should have been issued to fund pollution control projects; and, second, by collecting inflated penalty payments from federal facilities that failed to complete such projects in a timely manner.

4

The overriding factor in EPA's analysis of why economic benefit and the BEN model apply to federal agencies is its belief that, without exception, Congress and the President have directed it to treat federal agencies the same as any other member of the regulated community. However, in its attempts to treat federal facility violators "just like" private sector polluters, EPA has had to modify the manner in which it applies its economic benefit policies to federal entities, thereby creating a situation where federal agencies are, in fact, treated differently than similarly-situated private entities. First, the Agency has significantly altered its theory of economic benefit to eliminate "alternative investment" as the basis for determining that benefit has indeed accrued. Second, unlike in the private sector, an EPA federal agency enforcement action collects benefit-based penalties from an entity other than that which realizes the gain. Finally, it appears that EPA is willing to excuse federal agencies from the requirement that economic benefit penalties be paid in cash, rather than offset with supplemental environmental projects. In sum, in order for EPA to treat federal facilities "just like" private entities in terms of the size of fines, EPA must apply economic benefit penalty policies "differently."

The thesis is an excellent and detailed articulation of the many objections that are being raised in response to EPA's new enforcement strategy against federal facilities that showcases economic benefit as its centerpiece. As such, it is a tremendous resource for meeting the challenges posed by EPA's new enforcement strategy.

5

Even if EPA can recover economic benefit from federal agency violators, the computer model it uses to calculate such benefit (BEN) is unsound from both an economic and financial standpoint. As such, any penalty figures BEN generates are inherently suspect and should not be relied upon as a basis for penalty assessments in civil enforcement actions.

ELD has asked the Air Force to have LTC Little's thesis added to its FLITE database.³ In the meantime, those interested in obtaining a copy of the thesis may do so by sending an email to LTC Little at:

Jacqueline.Little@hqda.army.mil

For further information contact your Environmental Law Specialist.

¹ Size of the business penalties are a surcharge (typically 50%) added to economic benefit and gravity-based penalties to ensure that wealthy violators feel the deterrent sting of enforcement. The amount of this type of penalty is based on the capital assets of the business that are presumed available to be sold or mortgaged to raise funds for environmental compliance or penalties.

² BEN is the computer model used by EPA to calculate the economic benefit component of an administrative civil penalty. See OFFICE OF ENFORCEMENT AND COMPLIANCE ASSURANCE, U.S. ENVIRONMENTAL PROTECTION AGENCY, BEN USER'S MANUAL 1-1 (Sep. 1999) for detailed information about the model, its underlying theories of economic benefit, and its calculation methodology.

³ The environmental law section of FLITE is accessible via the Internet at <http://envlaw.jag.af.mil> and is available cost free to environmental legal specialists. ELD's point of contact for FLITE passwords is MAJ Liz Arnold, (703) 696-1593, e-mail: elizabeth.arnold@hqda.army.mil.

STATE REGULATION OF STORAGE TANKS UNDER THE CLEAN WATER ACT

By Michael Worsham
USAEC Compliance Branch

The United States Government is subject to environmental regulation by state and local regulators under the Clean Water Act (CWA). This is because Congress has waived its "sovereign immunity" from state and local regulation under the CWA. In order for a waiver of sovereign immunity to be valid, Congress must "unequivocally express" it in the language of the statute concerned. Executive Orders, failure to object to state regulation, compliance agreements, and individual actions of base commanders (past and present) are all ineffective as waivers of sovereign immunity.

In the case of storage tanks subject to the CWA, Congress has required federal facilities to comply with state and local government regulatory requirements, but has not waived sovereign immunity as to punitive fines. Following are some basic questions and answers addressing circumstances that installations may face. Specific questions that arise regarding the applicability of a particular state law or regulation to an Army installation should be referred to the installation or MACOM environmental attorney.

Q May the Army pay penalties imposed by a state or local regulators under the Clean Water Act?

A NO. In 1992, the U.S. Supreme Court addressed whether the waiver of sovereign immunity under the CWA is sufficiently broad to allow a state regulator to impose penalties against a federal facility for past noncompliance. The Court determined that the CWA requires federal facilities to obtain proper permits for their activities but does not subject them to fines to punish them for past violations. Likewise, federal facilities are not subject to penalties for ongoing noncompliance, as long as the facility commits to take reasonable and expeditious steps to

get into compliance. The Court's ruling, however, indicated that federal facilities that defiantly refuse to obey direct orders from state or federal judges to take steps to comply with state regulations may be held in contempt, and be subject to "coercive" fines designed to force action. There has never been an instance where it has been necessary for a state or local regulator to seek coercive fines against Army facilities. States have sought punitive fines on a number of occasions, but Army facilities do not have the legal authority to pay them.

Q Does the Army Pay fines imposed by EPA under the Clean Water Act?

A NO. Although the legal standard for deciding whether federal facilities are subject to punitive fines by EPA regulators is less exacting than for state and federal regulators, EPA acknowledges that the CWA does not contain authority for EPA to impose punitive fines against water treatment facilities on Army installations.

Q What is the scope of the waiver of sovereign immunity under the Clean Water Act regarding storage tanks?

A The CWA waiver of sovereign immunity states that federal facilities and federal agencies engaged in any activity that may result in the discharge or runoff of pollutants are subject to state and local laws and regulations respecting the control and abatement of water pollution to the same extent as any nongovernmental entity. This means that Army facilities are subject to regulation by state and local governments for above ground storage tanks under the CWA. In some instances, this may also encompass federal activities that would otherwise be unregulated based on waivers of sovereign immunity in other environmental statutes. For example, states

may not regulate federal heating oil tanks (HOTs) under the RCRA (Title I) provisions as underground storage tanks, as the RCRA-I waiver of sovereign immunity does not include HOTs. Nonetheless, if the purpose of a state law that regulates HOTs is to control or abate water pollution, the state law may be applicable to Army HOTs by virtue of the waiver in the CWA. Any questions regarding whether a particular state or local law or regulation is within the scope of the CWA waiver of sovereign immunity should be referred to the installation or MACOM environmental attorney.

Q Does the June 2000 Department of Justice (DOJ) opinion regarding EPA authority to assess fines for underground storage tank (UST) violations under RCRA-I change the ability of a state to assess punitive fines for storage tank violations under the CWA?

A NO. In June 2000, DOJ issued a legal opinion that resolved a controversy between DOD and EPA over EPA's authority to impose punitive fines for violations of UST provisions under RCRA-I. That opinion related only to EPA's ability to fine federal agencies for UST violations under RCRA-I, and was not based on an analysis of sovereign immunity or any provision of the CWA. Thus, the position of the United States (i.e., DOJ), and consequently the Army's position, is that neither the waiver of sovereign immunity in the CWA nor the waiver in RCRA-I allows state or local regulators to impose punitive fines against federal installations.

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FASTT Partnership Exceeds \$30 Million in Army Savings

By Doenee Moscato

USAEC Pollution Prevention Branch

The Joint Service Field Activity Support and Technology Transfer (FASTT) Team continues to pay dividends for Army installations, most recently for Fort Bragg, where the two-week site survey of maintenance processes resulted in identification of over ten million dollars in potential savings. The Fort Bragg survey is the third conducted by the Joint Service FASTT team at an Army installation, and is one of thirteen surveys to involve Army personnel.

The Fort Bragg team comprised representatives from the Army, Navy, Air Force, and Marine Corps, and included three personnel from the Army Environmental Center (AEC). The team met with installation personnel, and reviewed processes and procedures in order to identify process changes or technologies that would provide cost reductions while reducing pollution at the source.

Areas of review included motor pools, firing ranges, parachute rigging shops, the hospital, aircraft maintenance facilities, fuel distribution points, and administrative buildings. Fifty-one pollution prevention opportunities representing \$10,561,582 in potential cost savings over ten years were presented to the installation for implementation. Among the suggestions were:

- A HELICOPTER HYDRAULIC SERVICING UNIT
- STEAM CLEANER UNITS
- REDESIGN OF CARGO PARACHUTE BAGS
- NEW SOLVENT BASINS WITH ON BOARD FILTRATION
- AN INSTALLATION WIDE RECYCLING CENTER
- USE OF RECHARGEABLE BATTERIES FOR TRAINING
- REPLACING CLAY ABSORBENT FOR **POL** CLEAN-UP
- A CLEANING RAGS CONTRACT
- BULK OIL AND LUBRICATION DISPENSER FOR MOTOR POOLS
- RECYCLING OF WASTE ETHANOL FROM HOSPITAL LABS
- RECYCLING OF **JP-8** FUEL
- A BATTERY REJUVENATOR FOR TACTICAL VEHICLES
- A VEHICLE AIR FILTER CLEANER
- LOAD SHED DEVICES FOR NON-CRITICAL ELECTRICAL LOADS
- SALE OF USED OIL
- A NEW TYPE OF FLOOR SCRUBBER FOR "NO SPARK" MAINTENANCE AREAS



Beginning with the first FASTT survey at Red River Army Depot in October 1997, the cumulative total ten-year projected savings from this partnership exceeds \$30 million at Army installations alone. In addition to the monetary savings, the Army has benefited from the interaction with environmental and maintenance process engineers and technicians from all service branches. Army personnel from AEC, USAOC/S, Red River Army Depot, Kansas Army National Guard, and Fort Bragg have participated in FASTT surveys to date.

In addition to Red River Army Depot, surveys have been conducted at:

- ANNISTON ARMY DEPOT, AL
- SUBMARINE BASE KINGS BAY, GA
- EGLIN AIR FORCE BASE, FL
- NAVAL STATION ROTA, SPAIN
- NAVAL WEAPONS STATION EARLE, NJ
- EDWARDS AIR FORCE BASE, CA
- NAVAL AIR STATION NORTH ISLAND, CA
- NAVAL STATION POINT MUGU, CA
- NAVAL STATION PORT HUENEME, CA
- SEYMOUR JOHNSON AIR FORCE BASE, NC
- FORT BRAGG, NC
- NAVAL AIR STATION JACKSONVILLE, FL

The relationships formed and the experiences gained from other service members during these surveys have greatly expanded the Army's base of knowledge that can be drawn upon in the future for both environmental and maintenance process improvements.

The FASTT Team currently is finalizing plans for FY 01 and preparing a list of potential site visits for FY 02. There are visits scheduled at Fort Benning, Georgia, in December 2000, and Fort Bliss, Texas, in September 2001. If your activity would like to consider a FASTT visit, or if you would be interested in serving on the FASTT Team, please contact: Doenee Moscato, Army FASTT Team leader, 410.436.1228, DSN 584, e-mail: Doenee.Moscato@aec.apgea.army.mil.



REGULATION OF MERCURY IN THE NORTHERN REGION — A TREND ANALYSIS

By Patrick W. Merkel
Stateside Associates

Mercury is a naturally occurring metal that can be released into the environment through air emissions, water discharges or solid waste. Mercury is considered a Persistent, Bioaccumulative, and Toxic (PBT) Pollutant. In its organic form, methyl mercury accumulates in fish and becomes more concentrated as it moves up the food chain. Mercury is regulated as a neurotoxin because it is believed to slow fetal and child development and cause brain and kidney damage. Scientific research has not determined the level of mercury exposure at which health effects begin to occur.

Because mercury can be released through different media and because the risks from mercury exposure are not fully understood, the regulation of mercury varies across the country. In addition to media specific programs, EPA and the states have begun to initiate multimedia regulatory programs addressing mercury. The purpose of this paper is to describe some of the national and state level efforts to regulate mercury.

NATIONAL AND REGIONAL DRIVERS

The **U.S. Environmental Protection Agency (EPA)** has developed a multimedia action plan for the control of mercury as part of its efforts to reduce Priority PBTs. The Action Plan proposes to: control emissions from air point sources; revise water quality criteria; improve measurement of mercury in water; seek reductions in uses of mercury; lower the reporting threshold under the Toxic Release Inventory (TRI); develop environmentally acceptable disposal method for mercury wastes designated as hazardous wastes; seek reduction in exposure to highly exposed populations; increase compliance monitoring and enforcement of mercury regulations; continue internal efforts to reduce mercury releases; perform and support further research; and support state, tribal, and local governmental efforts to reduce mercury.

One way EPA plans to reduce mercury emissions from air point sources is through reducing emissions from coal burning electric power plants. Coal burning electric plants are the largest source of mercury emissions. In 1998, Congress prohibited EPA from spending money on any further development of regulations governing emissions from coal burning electric power plants until the National Academy of Sciences (NAS) reviewed the scientific data used by EPA in determining mercury's toxicity and potential risk to the public.

In June, the NAS finished its review of EPA's data and concluded that EPA was justified in setting stringent levels of protection from mercury. The NAS study found that EPA's guidelines on mercury are adequate based on the latest scientific evidence, but more research needs to be done to understand the risks from mercury exposure. The study reported that while most Americans are at a low risk of adverse health effects, children are at the greatest risk of neurological problems from mercury exposure. EPA is now expected to continue its rulemaking to control emissions from coal burning electrical power plants.

EPA has initiated a pilot program to evaluate methods for addressing mercury deposits from air emissions into water bodies. In 1999, EPA awarded grants to Florida and Wisconsin to investigate the relationship between air emissions of mercury and water quality. The states will study impaired water bodies (Devil's Lake in Wisconsin and a portion of the Florida Everglades) that have fish consumption advisories due to high levels of mercury in fish. The studies will focus on: determining the amount of mercury reductions needed to meet water quality standards; determining the amount of mercury contributed by effluent or direct discharge, air deposition, and natural sources; and determining the geographic location of sources contributing mercury to the water bodies. EPA expects the study to help federal and state governments determine how air and water

programs can jointly develop programs to address mercury.

The **New England Governors' Conference (NEGC)** is a regional group of the Governors from the six New England States (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont). NEGC members meet to discuss issues common to the New England region and coordinate regional policy programs. NEGC often holds its meetings in conjunction with the Eastern Canadian Premiers (ECP). In June 1998, NEGC and ECP (NEGC/ECP) adopted a Regional Mercury Action Plan and an Acid Rain Action Plan to address mercury and acid rain problems in the region.

The Mercury Action Plan set a goal of virtual elimination mercury releases in the region. To achieve this goal, the Mercury Action Plan included the following recommendations: reduce/eliminate the use of mercury in medical and consumer products; identify and implement source reduction programs and develop model legislation; draft model legislation implementing coordinated labeling and manufacturer take-back programs; reduce emissions from municipal solid waste combustors, medical waste incinerators, sludge incinerators, and utility and non-utility boilers; eliminate the use of mercury in school science programs; and adopt measures to curtail the sale of elemental mercury.

The Acid Rain Action Plan indirectly addresses mercury because mercury emissions are produced during the burning of fossil fuel. The Acid Rain Action Plan contains 22 specific recommendations states can follow to significantly reduce sulfur dioxide (SO₂) and nitrogen oxide (NO_x) emissions, the primary ingredients of acid rain. The Plan includes: reduction in SO₂ and NO_x emissions; surface water quality and fine particulate monitoring; regional fine particulate monitoring; coordinated data collection; and a public education

and outreach program.

In July, NEGC/ECP met to discuss issues of concern for the New England region. During the meeting, NEGC/ECP vowed to continue implementing their Mercury and Acid Rain Action Plans and adopted resolutions on the topics. The mercury resolution calls for emission reductions from boilers, source reduction, and further education about the effects of mercury. The acid rain resolution requests the Canadian and U.S. governments to develop further emission controls for SO₂ and NO_x.

The **New England Waste Management Officials' Association (NEWMOA)** is an association of the hazardous waste, solid waste, waste site cleanup and pollution prevention program directors for the environmental agencies in Connecticut, Maine, Massachusetts, New Hampshire, New York, Rhode Island, and Vermont. The Governors of the New England states established NEWMOA to coordinate interstate hazardous and solid waste, and pollution prevention activities and support state waste programs.

After NEGC/EPC produced their Mercury Action Plan in 1998, NEWMOA decided to draft model legislation to help achieve the goal of the virtual elimination of mercury releases in the region. In November 1999, NEWMOA published draft model legislation to reduce mercury-containing wastes. Most of the model legislation's requirements were modeled on legislation adopted or proposed in one or more states. NEWMOA held two public hearings on their draft model legislation in December 1999 and accepted written comments until January 2000. Based on comments received, NEWMOA revised its draft model legislation and released the revised model legislation in May.

The significant sections of the revised model legislation: phase in a ban on the sale of mercury-added products; require labeling of mercury-added products and their packaging; prohibit the disposal of mercury-added products in a solid waste or wastewater facility; require facilities involved in crushing scrap vehicles and appliances to make a good faith effort to remove all of the component mercury-added products prior to processing; require manufacturers to establish and

finance collection programs for mercury containing products; and limit the sale of elemental mercury.

The **Environmental Council of the States (ECOS)** is the national association of state environmental directors. ECOS' Air Quality Committee is hosting a workshop on mercury October 18-20 in St. Louis, Missouri. The workshop will address: the effects of mercury; federal and international policies on mercury; emerging technologies to reduce mercury use; and state programs on mercury.

STATE ACTIVITY

STATE LEGISLATION

During the 2000 legislative sessions, eight states (Maine, Massachusetts, Michigan, New Hampshire, New Jersey, New York, Vermont and Wisconsin) considered, or are considering, bills addressing mercury. The bills addressed the following topics: labeling requirements; disposal bans; recycling; bans on use; emission reduction; source reduction; and advance disposal fees.

To this point, five mercury bills have been adopted in 2000. Maine (ME L.D. 2084) and New Hampshire (NH H.B. 1418) adopted versions of NEWMOA's model mercury legislation. New Hampshire adopted bills requiring reductions in mercury emissions from municipal solid waste combustors (H.B. 625) and establishing a committee to study mercury source reduction and recycling. Wisconsin passed legislation (S.B. 287) establishing a register of greenhouse gas emission reductions, which includes mercury.

STATE REGULATIONS

The Wisconsin Department of Natural Resources has been petitioned to institute a rulemaking to address mercury deposition. Environmental groups and four Wisconsin state legislators submitted the petition. The petition requests adoption of a rule creating a comprehensive program that requires significant reductions in mercury emissions. The rule petition contains most of the provisions of a bill (S.B. 177) that was defeated in the Wisconsin Legislature during the 2000 session. The petition was discussed at the Wisconsin

Natural Resources Board's September 24-25 meeting agenda as an informational item. The Board is expected to rule on the petition in October.

After NAS released its study on mercury, Massachusetts announced a program to reduce mercury emissions by 75 percent within ten years and eventually eliminate mercury emissions. To achieve this goal, the state announced it will establish more stringent emission controls on incinerators and power-plants. The state also plans to convince school science labs, hospitals and consumers to stop using mercury-containing products.

Georgia and Mississippi are developing Total Maximum Daily Loads (TMDLs) for a number of mercury impaired water bodies in their states. A TMDL is a measure of the amount of pollution a water body can receive and still meet surface water quality standards for its designated uses. Mercury TMDL development for a waterbody can result in restrictions on point sources, non-point sources and air sources. Water bodies in several states are considered impaired by mercury, and TMDLs will have to be developed for these water bodies.

New Jersey and North Carolina are conducting studies on mercury and its health effects. Alabama is considering implementation of an air monitoring program for mercury in the southern part of the state this fall. As mentioned above, Florida and Wisconsin have received grants from EPA to investigate reducing mercury air emissions. These states are studying how air emissions impact water quality.

CONCLUSIONS

The regulation of mercury by federal and state governments is likely to increase in the coming years. Because the risks from mercury exposure are not fully understood and the numerous ways mercury can be released into the environment, the regulation of mercury will vary across the country. Mercury will be regulated as part of a comprehensive strategy, like those to eliminate PBTs, or through individual program efforts to: reduce air emission; limit wastewater discharges; encourage recycling; or ban mercury use in consumer products.

For further information, contact your NREO Regional Environmental Coordinator.

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